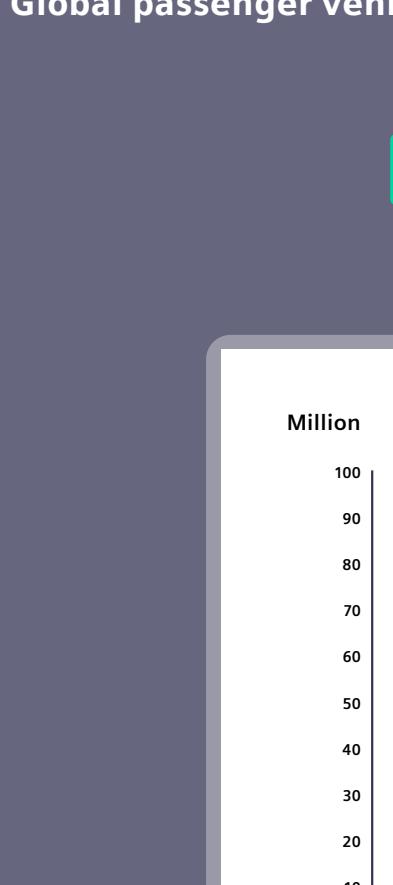


# Vehicle Electrification and E/E System Development

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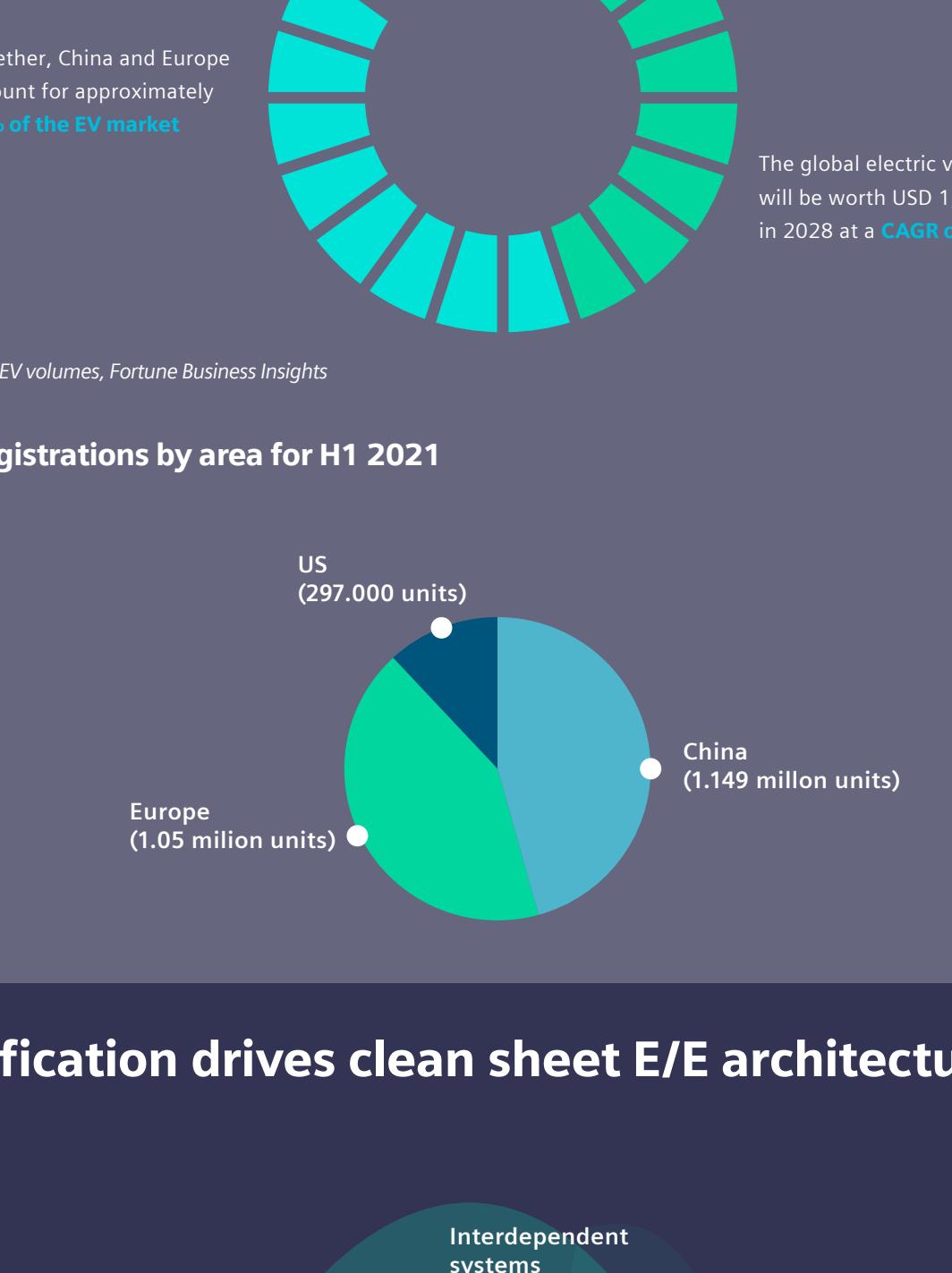


## Market Growth

### Global passenger vehicle sales outlook by drivetrain



Due to falling battery prices, EV sales will outpace traditional vehicle sales in the next decade.



Source: BNEF

During the pandemic, EV sales grew by 42% while global automotive markets shrank. New-EV sales more than doubled worldwide in 2021, accounting for around 9% of total new-car sales.

Source: IEA

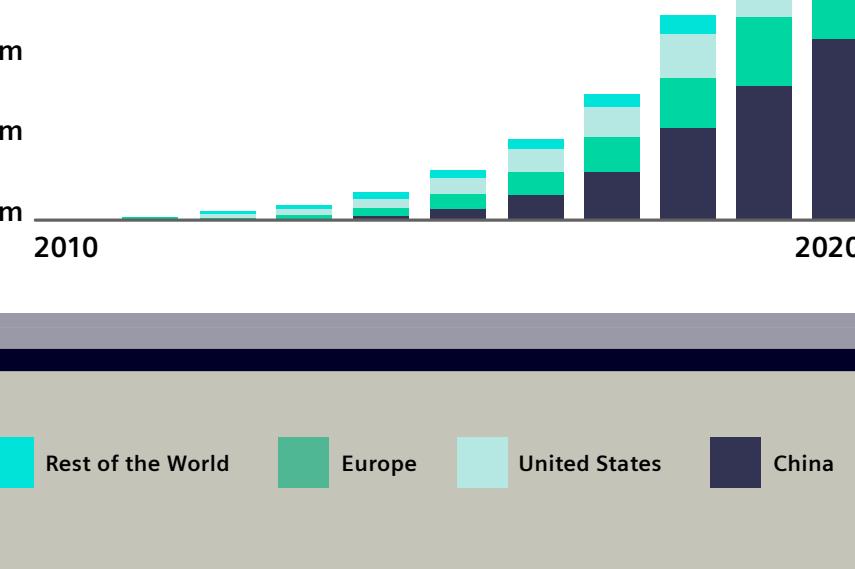
By the year 2025, 20% of all new cars sold globally will be electric

Together, China and Europe account for approximately 80% of the EV market

The global electric vehicle market will be worth USD 1,318.22 billion in 2028 at a CAGR of 24.3%

Source: IEA, UBS, EV volumes, Fortune Business Insights

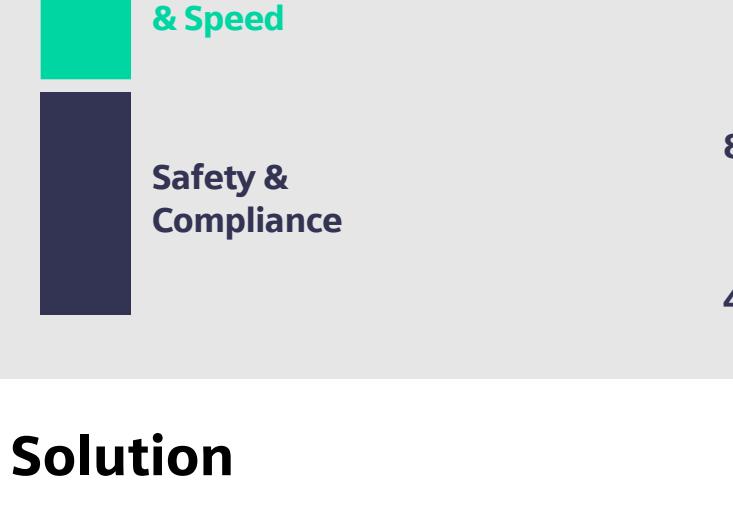
### New EV registrations by area for H1 2021



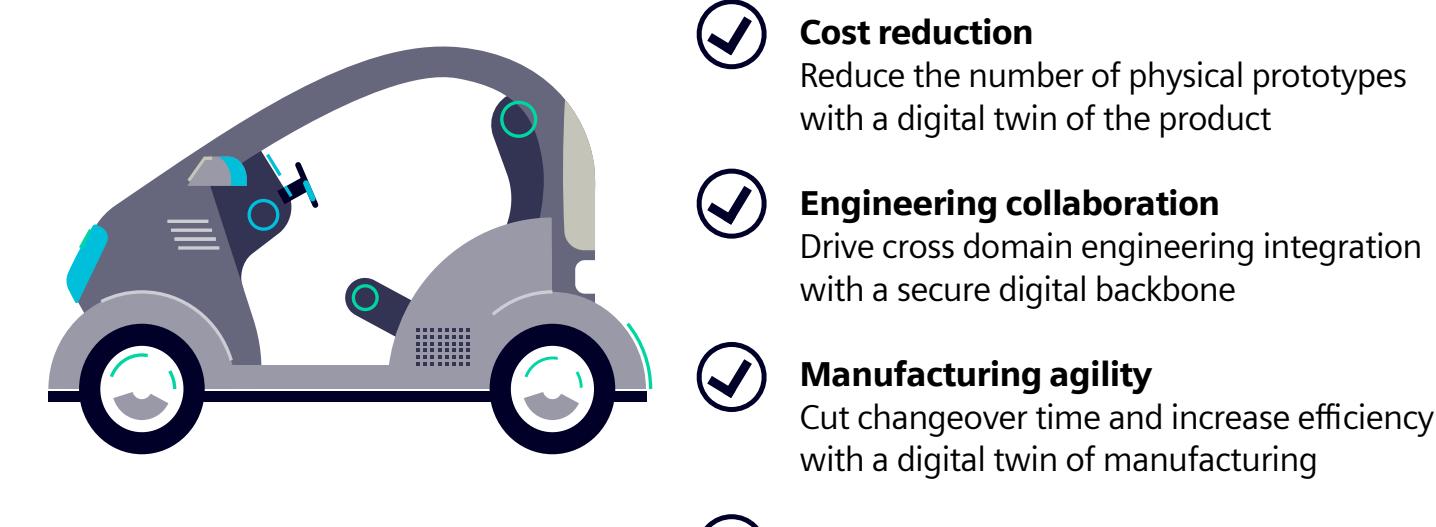
## Electrification drives clean sheet E/E architectures



### EV electrical system design integration, safety and verification



Today's electric vehicles have a huge amount of electrical content



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## Collaborative approach with the digital twin

### Benefits customers have realized using Capital for E/E systems development

#### 1. Enhanced Margins

#### 2. Increased Range

#### 3. Faster to Market

#### 4. Competitiveness

#### 5. Enhanced Brand Perception

#### 6. Increased Customer Satisfaction

#### Innovation & Speed

#### Safety & Compliance

#### Integration

- Space reservation and packaging
- Design change control & release management

#### Safety assurance

- Requirements traceability & verification
- Signal routing & separation; redundancy
- Diagnostics, maintenance & repair support

#### Simulation and verification

- Correct-by-construction
- Electrical simulation

#### REDUCTION

#### 1. Per-vehicle Cost

#### 2. Per-vehicle Weight

#### 3. Electrical Design Time

#### 4. Quote-to-Production Cycle Time

#### 5. Service Documentation Time

#### 6. Fault Diagnosis Time

#### INTEGRATION

#### 7. Weight Increase

#### 8. Cyber Security

#### 9. Virtual Verification

#### 10. Interdependent Systems

#### 11. Functional Safety

#### 12. Multiple Voltages

#### 13. Hybrid

#### 14. Fuel Cell

#### 15. Internal Combustion

#### 16. Plug-in Hybrid

#### 17. Battery Electric

#### 18. Electric

#### 19. Internal Combustion

#### 20. Fuel Cell

#### 21. Hybrid

#### 22. Internal Combustion

#### 23. Fuel Cell

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